

I CLAIM:

1. A system for organizing tools comprising

a manufacturing station having a surface or mechanism for supporting tools,

a set of tool-identifying markers corresponding to a set of tools selected for a

5 particular manufacturing procedure, the markers being reversibly affixed to the surface in

a manner allowing ongoing refinement of the configuration to maximize efficiency of the
manufacturing procedure.

2. The system of claim 1, wherein the markers are affixed to the surface

10 magnetically.

3. The system of claim 1, wherein each marker has a shape resembling the

shape of a corresponding tool.

15 4. The system of claim 1, wherein the surface is substantially vertical.

5. The system of claim 1 further comprising tool marks configured for

affixing to the set of tools, each tool mark indicating a connection between the respective

tool and the manufacturing station or a particular location on the surface of the station.

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6. The system of claim 1 wherein the relative positions of tools in the

arrangement are determined at least partially by a sequence of steps in the procedure.

7. The system of claim 1 wherein the relative positions of tools in the arrangement are determined at least partially by the frequency of using the tools in the procedure.

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8. A method of carrying out a manufacturing procedure comprising selecting a procedure including a first sequence of steps for manufacturing a first product at a work station,

10 selecting a first set of tools for carrying out the first sequence of steps, engineering a first positional arrangement for the first set of tools to be held on a surface adjacent the work station, the arrangement being configured to maximize execution efficiency of the first sequence of steps by designating a site on the surface for each tool where the tool resides when not being used,

15 obtaining a first set of tool-identifying markers, each of the markers having a mechanism for being reversibly located adjacent the site for its respective tool, attaching the tool-identifying markers to the surface according to the first positional arrangement, and mounting the first set of tools at their respective sites.

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9. The method of claim 8 further comprising
selecting a second product to manufacture at the work station,
selecting a procedure including a second sequence of steps for manufacturing the
second product,
5 selecting a second set of tools for carrying out the second sequence of steps,
engineering a second positional arrangement for the second set of tools to be held
on the surface adjacent the work station, the arrangement being configured to maximize
execution efficiency of the second sequence of steps by designating a site on the surface
for each tool in the second set where the tool resides when not being used,
10 obtaining a second set of tool-identifying markers for the second set of tools, each
of the markers having a mechanism for being reversibly located adjacent the respective
site on the surface,
removing at least some of the first set of tool-identifying markers from the surface,
attaching the second set of tool-identifying markers to the surface according to the
15 second positional arrangement, and
mounting the second set of tools at their respective sites on the surface.

10. The method of claim 8, further comprising
replacing the second set of tool-identifying markers with the first set of tool-
20 identifying markers according to the first positional arrangement.

11. The method of claim 8, wherein the tool-identifying markers have shapes that resemble the tool they identify

12. The method of claim 8, wherein the tool-identifying markers are
5 magnetized.

13. The method of claim 8, wherein the product is a component of a second product.

10 14. The method of claim 8, wherein at least a portion of the surface is substantially vertical.

15. The method of claim 8, wherein the surface is comprised of multiple interchangeable panels.

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16. The method of claim 8, further comprising connecting a computer to the work station.

20 17. The method of claim 8, further comprising connecting a display screen to the work station.

18. The method of claim 8, further comprising
providing at least one electrical outlet at the work station, the position of the outlet
being moveable to accommodate different positional arrangements of tools for different
product manufacturing.

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19. The method of claim 8, further comprising
marking the tools so they are associatable with their tool-identifying markers.

10 20. The method of claim 8, further comprising
marking the tools so they are associatable with a particular work station.

21. A system for arrangement of tools adjacent a support structure for holding
tools, comprising:

15 a set of labels configured to be connected to the tools; and
a plurality of tool markers disposed adjacent the support structure to mark a
selected configuration of the labels and their respective tools, each tool marker
corresponding visibly to a different label of the set and indicating a position on the
support structure where the respective tool resides when not being used.

20 22. The work station of claim 21, the tools defining silhouettes, wherein the
tool markers include shapes corresponding to the silhouettes.

23. The work station of claim 21, wherein each label and each tool marker have indicia, and wherein the indicia of each label corresponds to the indicia of a different tool marker.

5 24. The work station of claim 21, wherein the tool markers are configured to be repositionable with respect to the support structure to mark different selected configurations of the labels and their connected tools.

10 25. The work station of claim 21, wherein the tool markers are defined by a layer that is painted on the support structure.

26. A work station for arrangement of tools, comprising:
a support structure including a plurality of tool holders and a surface defining an area, the support structure being reconfigurable to increase and decrease the area; and
15 a plurality of tool markers configured to be connected to the support structure adjacent the tool holders to specify a selected configuration of tools, the tool markers corresponding visibly to different tools and defining a position in the selected configuration for each different tool,

20 wherein the tool markers are configured to be repositionable on the support structure, thereby enabling the selected arrangement to be reconfigured.

27. The work station of claim 26, wherein the support structure includes a portable frame and a plurality of panels configured to be connected to the frame, and wherein the frame is adjustable to enable fewer or more of the panels to be connected to the frame.

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28. The work station of claim 26, wherein the tool markers are configured to stick to the surface upon contact.

29. The work station of claim 26, the support structure including at least one support element that at least substantially defines the surface, the support element including a plurality of holes, wherein the tool holders are configured to be connected via a selected subset of the holes to position the tool holders in correspondence with the selected configuration.

15 30. The work station of claim 26, further comprising at least one label configured to be connected to at least one of the different tools, the label including indicia corresponding visibly to a tool marker for the at least one tool.

31. A method of arranging tools for different projects, comprising:
selecting a set of tools for performing a project;
designing a positional configuration for arranging the tools;
marking the configuration with a tool marker corresponding to each tool according
5 to the configuration;
placing the tools in the positional configuration;
performing the work on the project; and
repeating the steps of selecting, marking, placing, and performing for a different
project and a different configuration.

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32. The method of claim 31, wherein the step of selecting and the step of
repeating the step of selecting select different sets of tools.

33. The method of claim 32, wherein the step of repeating the step of marking
15 includes a step of fabricating one or more additional tool markers.

34. The method of claim 31, wherein the step of marking includes a step of
fabricating the tool markers and a step of placing the tool markers after the step of
fabricating.

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35. The method of claim 31, wherein the step of marking is performed by connecting the tool markers to a support structure for holding tools, and wherein repeating the step of marking includes disconnecting one or more of the tool markers from the support structure.

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36. The method of claim 35, wherein repeating the step of marking includes reconnecting at least one of the one or more tools markers after the step of disconnecting.

37. The method of claim 31, wherein the step of selecting a configuration includes selecting the configuration from among a plurality of potential configurations according to an expected reduction in at least one of time and effort expended by the step of performing the work with the selected configuration relative to the other potential configurations.

15 38. The method of claim 31, wherein the step of selecting selects tool markers defining shapes corresponding to silhouettes of the tools.

39. The method of claim 31, wherein the steps of marking and placing are performed adjacent a surface having properties corresponding to length, width, area, 20 position, color, composition, texture, and distribution of holes, and wherein the step of repeating include changing at least one of the properties before repeating the step of performing.

40. A manufacturing facility, comprising:

a plurality of work stations positioned for use by different people, each work station including

5 a support structure having a surface and a plurality of tool holders for holding the tools in a selected configuration adjacent the surface, and a plurality of tool markers configured to be connected to the support structure adjacent the surface to mark the selected configuration of tools, the tool markers corresponding visibly to different tools and defining a position in the 10 selected configuration for each different tool,

wherein the tool markers are configured to be disconnected from the support structure after being connected to the support structure, thereby enabling the selected arrangement to be reconfigured.

15 41. The manufacturing facility of claim 27, wherein the tool markers are configured to be reconnected to other positions of the support structure after being disconnected.